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## Evolution of Environmental Accounting in Colombia

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### ABSTRACT

In this research work, a literary review on environmental accounting in Colombia was carried out, where it is evident that this term is a useful and beneficial strategy for organizations at a social and environmental level. This review was carried out on the 5 scientific articles of the institutions: Publindex, REDIB Ibero-American Journal of Innovation and Scientific Knowledge, Scientific Electronic Library Online [Scielo] and through Google scholar. With which it was possible to study that there are few investigations that show the implementation and importance of accounting in Colombia.

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Keywords: Environmental accounting, sustainable development, corporate social responsibility.

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### 1. Introduction

The term environmental accounting was established due to the relationship between the accounting and environmental part, becoming a branch of accounting that values from the same, the natural resources that are altered by the economic activity in which the organizations are focused. In this sense, a review of this subject and of the research works carried out based on scientific articles is made.

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### 2. Theoretical Framework

The disciplines are known as the branches of knowledge, which study everything related to the activities performed by a person and his environment, in order to know the characteristics that exist and that are changed over time, which grants man to identify his function with respect to the present and future reality, which leads to the determination of his concepts and actions (Prieto Cuentas & Theran Barajas, 2021). Among these disciplines is accounting, whose function, is based on calculating, categorizing and reporting mercantile matters (Cubides Robles, 2017), which are known as movements or actions performed by a natural or legal person in the process of its social object. So, it is influenced, that accounting originates from the need for financial operations and movements to be developed in a systematic, logical and organized way to present the economic entities (Cubides Robles, 2017).

In such a way, it is also said that, accounting management, has the purpose of making it easier to achieve the objectives proposed by the company, where the main thing is to forecast the inflows and outflows of cash and assets, with which the organization has, which make up the capital, where these collaborate in different ways as when making decisions regarding investment, sale and financial loans (Zambrano - Mercado y otros, 2020) On the other hand, there are several authors who have given a classification of accounting, among the most complete and extensive is the one proposed by (Valdivia, 2012) according to this classification environmental accounting is part of the type of social accounting.

Environmental accounting, which is a concept that establishes a relationship between accounting and the environment. This link arises due to the changes that are occurring worldwide due to the actions of people in the business environment, which has led managers and administrators to make coherent and viable decisions, so to face the situation in a responsible and committed way with the social, economic and environmental impact (Pacheco - Sánchez & Rodríguez - Téllez, 2019).

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On the other hand, regarding the changes that have been presented, the technological advances currently, have been amazing, given that they have improved the processes in companies and educational institutions, due to this, it is necessary and very relevant that organizations, education systems and all levels of training, aim at the implementation of technologies, for the realization of all their activities (Muñoz - Hernandez y otros, 2020) and so that through this, globalization is achieved.

On the other hand, companies and other economic entities around the world, have had to seek ways to be efficient and effective, for this reason, international financial reporting standards are established, which are largely of importance, which are related to the efficient use of natural resources, which offer us ecosystems, and their impact on companies. Therefore, this relationship is made known as environmental accounting which is a quantitative method, recording and organized, the consequences on the ecosystem due to the activities carried out in the different companies, such as determining preventive and corrective actions that will help protect and conserve the environment (Cubides Robles , 2017)

An example of the above is the research conducted by (Fonseca- Carreño, 2019), where it is evident that the production systems studied do not carry out good environmental practices that help minimize the negative impacts caused by the application of traditional production systems in environmental matters such as socioeconomic affectation, which endangers the sustainability of rural agro-ecosystems, thus generating environmental deterioration. For which, it is necessary to apply the concept of environmental accounting that will give a more complete and significant contribution that will help to measure the variables that intervene in the production systems; and thus compare which is the most environmentally and economically viable. (Lemus - Quintero & Carrascal - Delgado, 2020)

raises measure in based on the Social and Corporate Responsibility (CSR) of fifteen (15) companies in Colombia, where through the results obtained from the companies is analyzed, that these present a sustainability report, which aims to inform with this document to the top management about the work they perform at the financial level, This document is intended to inform senior management about the work they are doing at the financial, social and environmental levels, allowing them to recognize the possible risks to which they may be exposed, taking into account that leadership is an essential characteristic in a company, since the term leadership is established as an important issue in the public and private field of administration, as it affects the outcome of CSR actions. In addition, Colombia has assumed the term CSR as that value of responsibility that the company has to achieve the economic, social and environmental goals set, through the development and implementation of projects that largely reduce the problems in the country (Lemus - Quintero & Carrascal - Delgado, 2020)

CSR had to face the pandemic known as COVID-19, which became an opportunity to modify the contexts of financial management and connections with companies, establishing new requirements for many economies, for which most developing countries did not have adequate preparation to face this situation, i.e., organizations faced very significant changes in all their processes (Amado, 2020) With the above, the concept of sustainable development is being adopted, which continues to gain importance in organizations, where it is defined as a duty that organizations have to adopt measures and production systems that aim to take care of the environment in a sustainable manner, and to ensure the survival of future families to support their future needs by taking advantage of the natural reserves provided by the ecosystem (United Nations Educational, Scientific and Cultural Organization, 2012).

In addition to the above, (Manzano - Durán y otros, 2021) indicate that society and its companies should incorporate in their production practices, elements related to the social-economic and environmental, oriented towards the sustainability of the environment as a contribution of value to social development and with the intention of reducing the effect created by the actions carried out.

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### 3. Methodology

The type of research chosen is qualitative and descriptive, in which a literature review is conducted, scientific articles and texts related to the topic of interest; for the choice of the references used, the list of academic journals that were related to this topic was debugged, for which the following conditions were taken into account for their choice: the journal must be edited and published in a recognized institutions: Publindex, REDIB Revistalberoamericana de Innovación y Conocimientocientífico, in Scielo (Scientific Electronic Library Online) and through Google scholar the search for more articles, focused on the subject of environmental accounting in Colombia, in addition to dealing with the central theme of this research "Environmental Accounting" was carried out and each of the published texts was studied to analyze the evolution that this subject has had in Colombia.

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### 4. Results

The results obtained were taken from 5 scientific articles from the institutions: Publindex, REDIB, in Scielo and through Google scholar.

In each web page of these institutions, the word accounting was registered in the search engine, and then the most recent articles published in Colombia in recent years were selected.

**Tabla1 Artículos científicos elegidos**

<b>Año</b>	<b>Artículo científico</b>	<b>Institución</b>
<b>2018</b>	¿En qué consiste la contabilidad social y medioambiental? (Casson, 2018)	Red Iberoamericana de Innovación y Conocimiento Científico
<b>2012</b>	La economía biológica y el avance económico en Colombia: desafíos y alternativas para un país con mucha diversidad” (Zuñiga y Guarín, 2017)	
<b>2021</b>	Corriente social y contabilidad en el ámbito socio-ambiental: el papel de las contracuentas como una acción crítica (Cabrera y Quinche, 2021).	
<b>2019</b>	Gestión de registros ambientales de industrias manufactureras que generan desechos peligrosos (Florez y Morales, 2019).	Scielo
<b>2019</b>	Desafíos a los que se enfrenta Medellín en la aplicación de contabilidad del ambiente. (Londoño y Martínez, 2020).	Google Scholar

Fuente. Elaboración propia (2022).

In the Publindex search engine, the option article was given, then the topic and keyword Environmental Accounting was chosen, but no scientific articles related to this topic were found.

When searching the Ibero-American Network of Innovation and Scientific Knowledge, 704 articles were found, of which 2 articles were selected. One of these articles, is (Casson, 2018) where he presents two definitions, accounting in social and environmental, which have different currents and diversity of ways of this term, one of these currents consists in applying the accounting theory on the signs of processes at social and environmental level, and is used as a term generally distinct from accounting theories. (Casson, 2018), in his research mentions CSR, which is recognized in companies bearing in mind that the proposed objectives to be fulfilled under a series of decisions that have affectations on the environment of the environment, community, workers etc. Therefore, companies must demonstrate the implementation of appropriate practices and responsibility for the effect of their decisions.

Therefore, accounting is a response to this commitment to CSR, through the application of double entry to the collection, calculation and evidence of issues related to this definition" Tua, 2012, as cited in (Casson, 2018) For thirty (30) years, various branches of accounting specificity have been recognized, which allows companies to be socially responsible, along with the environmental part. In which, (Casson, 2018) based on his work experience, affirms that social and environmental accounting has to do with sustainability in the deductive, which will depend on the person who expresses or postulates a coherent and consistent definition.

On the other hand, the research of ( Zúñiga Zapata & Guarín Echeverry, 2017), conducted an analysis where they found the link between Bioeconomy and environmental accounting, which is to guide this relationship in the sustainable business environment through the Bioeconomy. Taking into account that in Colombia has been carried out accounting research works with technical contribution and little environmental contribution. Therefore, in order that in Colombia the economy increases in economic, social and environmental benefit, it is necessary to carry out and implement investigative works that demonstrate the great problem of the development of the economy is to base it on those criteria that are convenient for the sustainable use of the riches of nature and this serves both economic and political interests.

In Scielo we found 55 published articles, of which those were carried out in Colombia. In a research conducted by (Cabrera & Quinche, 2021)they studied the counter-accounts due to the criticism of the social currents by the social and environmental differences and the changes of form, resignifications of the actions on the part of the people involved in these problems or in the formation of ways of social coexistence as natural. Through the study it was considered that the critique has three visions: Marxist, Foucauldian and decolonial, which approached to characterize the impression of the counter-narratives with firm theoretical bases, and thus to confront and give sense to the relevant discourses related to their affectations and increase by the social and environmental conflict and the legal and illegal armed action (Cabrera & Quinche, 2021)

Therefore, (Cabrera & Quinche, 2021) from the external accounting Thomson et al, 2015, cited by (Cabrera & Quinche, 2021), achieved in the controcuentas describe the socio-environmental conflicts that resist social movements, as the identification of primary impacts, such as the actors involved and other complaints, claims and preticones in a unique and controversial scenario. Thus, accounting is considered an extensive and complicated process, which serves as a basis for generating primary data that can be monitored, used for decision making and accountability, which can be elaborated by different authors. Another article published in Scielo analyzed is that of (Florez & Morales, 2019), which records the results obtained from the research conducted, which consisted in the implementation of the subsystem of environmental accounting management of industrial organizations in the department of Antioquia.

Therefore, the responsibility is endorsed by senior management to generate timely and reliable environmental reports, an example of this is the information that must be presented for the accounting report, which according to (Florez & Morales, 2019)this is obtained from accounting reports, records of verification and legitimacy of the company: information of organizational constitution, certificate of land use, legitimacy of the business before the DIAN, RUT or Registro Único Tributario, Chamber of Commerce and accreditation of the existence and legal representation.

Likewise, as technical information that relates to the realization of the productive stages or provision of services, where the point of generation of hazardous waste begins; the documents that support this data have the purpose of: to show the values generated as type of waste (classification given in the Basel Convention), and to have the certificates received by representative entities and in charge of recycling, with which the stability of the system planned for the inputs and outputs of the product is complied with. Therefore, the implemented instruments served as a pedagogical means that allowed the companies to adopt these studied topics. The work of financial and environmental management presented becomes an instrument that contributes to give advantages to the situation of environmental pollution (Florez & Morales, 2019)

By Google scholar the research work of ( Londoño & Martinez, 2020)was found, where he emphasizes how important is the environmental training of professionals, since from the different areas of knowledge, it is possible to generate resources, tools, manage strategies or actions that mitigate the environmental problems presented in the different economic activities. In addition, (Londoño & Martinez, 2020)considers that environmental accounting is not only an economic valuation by the companies, where it is known if it is useful or not, since this concept involves an integral evaluation of the environment where the economic activity of the different companies is executed, and that leads to the generation of new natural resources to sustain the balance of the ecosystem.

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## 5. Discussions

In the review of articles related to this topic, we have found mostly theoretical and informative information, but not practical, i.e., there is a lack of more research information on the implementation of environmental accounting in Colombian organizations and the progress that environmental accounting has had.

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## 6. Conclusions

The literary revision made on the subject of environmental accounting in the institutions of publication of scientific articles, it is concluded that there is little research in Colombia in relation to this term so important and useful for the companies. And that environmental accounting is considered as a strategy for sustainable development and that it also contributes to Corporate Social Responsibility.

In this sense, environmental accounting is not complying with the accounting and environmental relationship, since it is not being applied in a complete way, but companies are giving more importance to accounting information, leaving aside the environmental aspect.

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